Economics

The word economics is derived from a greek word "Oikonomia" which includes 2 words Oikos & means household & nomos means management i.e economics means household mgt (Income & Expenditure mgt)

Economics is a social Science concerned with the production, distribution & consumption of goods & services

Social Science :- which explains Economic activities of the humans

Types of human activity

Economic
↳ Carried out to earn livelihood e.g food in rest.

Non-Economic
↳ performed out of love sentiments, sympathy e.g food by mother

Types of Economic activities

Production	Consumption	Distribution
Activities undertaken for the conversion of raw material into finished product to satisfy human want	Act of using the goods & services to satisfy the human wants	Allocation of income generated among the factors of production

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Scarcity and Choice:-

⇒ ↓

Scarcity is the condition in which our wants (for goods & services) are greater than the limited resources (land, labour, capital) available to satisfy those wants.

Choice refers to the process of choosing or selection from available alternatives

→ Many economists say that if scarcity didn't exist, neither would economics.

Economic problem:-

Economic problem is essentially the problem of rational choice or the issue of best possible use of resources which arises because of the scarcity of resources having alternative use to maximise economic gain at the individual level & social welfare at the level of economy as a whole

Economic problem → Central problem of an economy

↓

Because it is faced by every economic system at all levels

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↳ Branches of Economics

Micro-Economics	Macro Economics
Greek word Mikro meaning Small	Greek word makro meaning large
↓	↓
Individual, consumer, producers	whole / aggregate parameters
E.g:- Household Income & expenditure	E.g:- National Income & Expenditure

↳ positive Economics

Deals with what are the economic problems & how they are actually solved

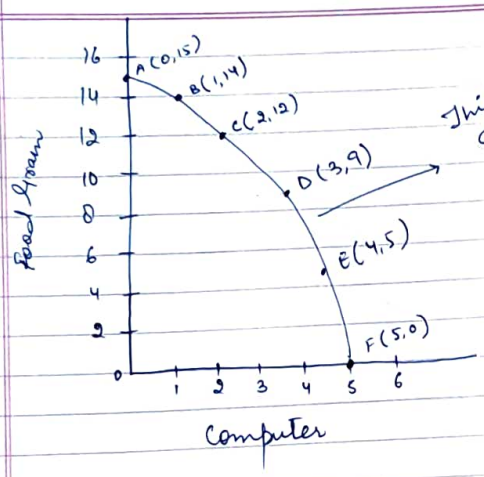
⇒ Describes
what is
what was
what will be

⇒ Example
Govt provides healthcare

Normative Eco.
Deals with what ought to be or how the economic problem should be solved

⇒ Describes
what ought to be
what should happen
what should have happened

⇒ Example
Govt should provide basic healthcare to all.



⇒ Opportunity Cost :-
The sacrifice or decrease in the qty produced of one good in order to increase the quantity produced of the other.

OC of producing addition 1000 Computer is

$$\frac{\Delta C}{\Delta F} = \frac{1000}{1000} = 1$$

Concept given by.
Prof. Paul A. Samuelson.

Production possibility frontier.

PPC is a diagram showing the maximum amt. of 1 good/service that is possible with the full & efficient utilization of available resources & the use of best technology at the disposal of an economy, given the output of other G & S.

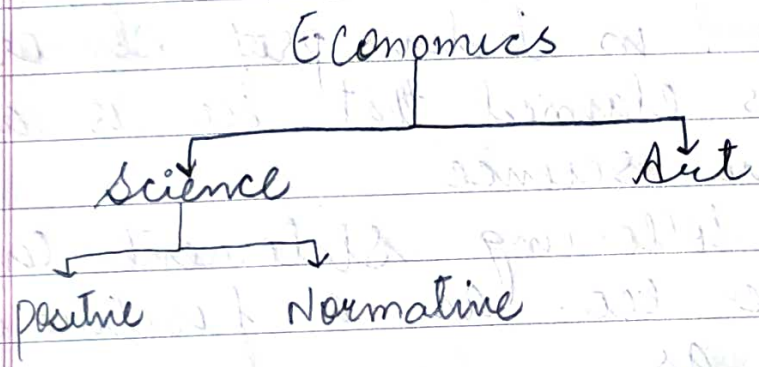
⇒ Assumption :-
1. Resources are scarce
2. " have alternative uses
3. " are given (quantity does not change)
4. " are fully & efficiently utilized
5. Best existing technology is used
6. State of technology does not change
7. Only 2 good are produced

production possibilities	Food grains (Quintals)	Computers (no.)
A	15,000	0
B	14,000	1000
C	12,000	2000
D	9000	3000
E	5000	4000
F	0	5000

Nature of Economics

There is a great controversy among the economists regarding the nature of eco. whether the subject eco. is considered as science or an art.

If it is a science, then either positive or normative science



⇒ Eco. as a Science :→

Science is a systematic study of knowledge & fact & develops the correlationship b/w cause & effect. (Demand & price) Science is not only the collection of facts but all facts must be systematically collected, classified & analyzed. All laws are universally (law of Demand) accepted & these laws are tested & based on experiment. Science can make future prediction & has a scale of (money) measurement

On the basis of all these Characteristics Robbins Claimed eco. as one of the subject of eco.

Now Qs arises whether eco. is +ve or normative science

- positive science deals with all the real things or activities. It gives solution what is? what was? what will be? It deals with all the practical things e.g poverty & unemployment are the biggest problems in India. prof. Senior, Robbins claimed that eco. is a positive science

→ The following statement can ensure eco as a positive sc. such as

1. Logically based :- The ideas of eco are based on absolute logical clarification & moreover, it develops relationship b/w cause & effect

2. Labour Specialisation :- labour law is an imp topic of eco. It is based on the law of specialization of labour. Economists must concern the cause & effects of labour division

3. Not neutral :- Eco is not neutral b/w positive & normative science

- Normative Science deals with ought to be? what ought to have happened? NS offers suggestions to the problems. The statements dealing with these suggestions are coming under NS. These statements give the ideas about both good & bad effects of any particular problem & Policy. e.g illetracy is a curse for Indian Economy. Prof Pigou, Marshall are of opinion that eco is a NS.

→ The foll. statement can ensure eco as a NS

1. Emotional View :- A rational human being has not only logical view but also has sentimental attachments & emotional views regarding any activity

2. Welfare Activity :- Eco is a science of human welfare. All the eco. forwarded their theories for the development of human standard of living

3. Eco planning :- is one of the main

instrument of eco. development. General economists have given their personal views for the successful implementation of economic plan. Hence eco. is coming under NS.

All these lead us to the conclusion that Eco. is both PS as well as NS. It does not only tell us why certain things happen however. it also gives idea whether it is right thing to happen.

2. Economics as an Art :→
Acc. to T.K mehta knowledge is science action is art. Acc. to Pigou, Marshall etc eco. is also considered as an art. In other way art is the practical application of knowledge for achieving particular goal. Science gives us principles of any discipline however art turns all these principles into reality. Therefore it can be claimed as art also because it gives guidance to the solution of all the economic problems.

4. Give the Meaning of Microeconomics and Macroeconomics

Economics is a dynamic subject with ever expanding and widening scope. The nature of problems and issues studied by economists keeps on changing, new problems keep emerging, and new areas keep entering in the sphere of economics.

Notwithstanding this ever expanding and changing subject matter of economics, economics is broadly divided in to two main branches. These are microeconomics and macroeconomics.

Micro economics is derived from the Greek word 'mikros' which means one millionth part or very small part. It is that branch of economics which studies behaviour, structure, decision making, relationships and performance of individual economic agents and variables. Some of the items studied under micro economics include individual producer, individual consumer, individual means of production, individual commodities, individual prices, individual markets et(C) An important issue studied in micro economics is the determination of prices of commodities and factors of production. It is for this reason that microeconomics is also called price theory.

Macroeconomics is derived from the Greek word 'makros' which means large. It is that branch of economics which studies behaviour, structure, decision making, relationships and performance of economic agents and variables at the level of economy as a whole. Some of the items studied under macro economics include aggregate demand, aggregate supply, national income, national employment, general price level et(C) Determination of national income and employment, and the fluctuations there in, is the most important issue of macro economics. Therefore, macroeconomics is also called income (and employment) theory.

Difference between the Two

- Micro economics studies economic agents and variables at individual level. Macro economics studies economic agents and variables at the level of an economy as a whole.
- Allocation of resources into different uses is the central issue of micro economics. Determination of, and fluctuations in, overall economic activity is the central issue of macro economics.
- Microeconomics is based on the assumption of full employment of resources. Macroeconomics is based on the assumption of under employment or unemployment of resources.
- Microeconomics works on the principle that markets soon create equilibrium. In macroeconomics, the economy may be, and often is, in a state of disequilibrium (boom or recession) for a longer period;
- In microeconomics, market mechanism has the central role to play. In macroeconomics, government plays the central role. The market mechanism, also called price mechanism, is the process by which market forces of demand and supply, by their free interplay, solve the problem of allocating resources, especially that of deciding how much of a good or service should be produced, but other such problems as well.
- In analysing issues at microeconomic level, the more common approach is that of partial equilibrium analysis, and at macroeconomic level, the more common approach is that of general equilibrium analysis. Partial equilibrium analysis is the method of economic analysis dealing with some part of the economy deliberately ignoring possible implications of changes in this part for what happens in rest of the economy. In contrast to this, general equilibrium analysis is the method of economic analysis in which the repercussions of changes in any one market throughout the economy are taken into account.
- In microeconomics, decisions are taken in such a way so that individual economic agents maximise their ends, for example, maximisation of utility by consumers, maximisation of profits by producers et(C) In macro economics, decisions are taken in such a manner so that economy as a whole is affected, e.g. increase in national income, decrease in unemployment, stability of prices et(C)
- Macroeconomics places greater emphasis on empirical data and trying to explain it. Microeconomics tends to work from theory first.

- There is little debate about the basic principles of microeconomics. It is unified and has a common core among all economists. Macroeconomics is more contentious. There are competing schools of thought about how to explain the behaviour of economic aggregates. These different schools of macroeconomics offering different explanations to the behaviour of economic aggregates include Classical, Keynesian, Monetarist, Austrian, Real Business cycle and some other schools of macroeconomic thought. But these divisions in macroeconomic thinking have been narrowing over the past few decades generating consensus in macroeconomics also. One of the aspects of this narrowing down of divisions in macroeconomic thinking is the broad agreement that a fully satisfactory macroeconomic model should be based on optimising behaviour of micro agents, that individual behaviour should satisfy rational expectations, and that the model should allow for wage and price rigidities. This is adding another scientific character to economics which is that a science is characterised by consensus as claimed by Thomas Kuhn.
- What is true at microeconomic level may not be true at macroeconomic level and what is true at macroeconomic level may not be true at microeconomic level. For example, saving at individual level is a virtue. But if all the individuals start saving simultaneously, it will lead to a reduced demand for goods and services which is a great hindrance in the way of functioning of an economy. Such relations are sometimes called micro-macroeconomics paradoxes.

5. Micro and Macroeconomics are Different but Interrelate(D) Explain.

Microeconomics and macroeconomics are the two main branches into which economics is divide(D) There are many differences between the two. The differences are so explicit that one is tempted to conclude that there is a water tight compartmentalisation of economics in to microeconomics and macroeconomics. But this conclusion is wrong.

In the presence of a number of differences in micro and macroeconomics, there is some sort of coexistence and complementarity between the two. In simple words, there is some interrelation and to some extent, interdependence between the two branches of economics.

- Both microeconomics and macroeconomics are the results of, and involve the analysis of, scarcity and the problem of choice arising out of it. In the end, both microeconomics and macroeconomics are examining the same things, albeit from very different perspectives. Microeconomics takes a bottoms-up approach while macroeconomics takes a top-down approach.
- Similarly, there is an obvious relationship between microeconomics and macroecono-mics in that aggregate production and consumption levels are the result of choices made by individual households and firms. For instance, the theory of investment, which is a part and parcel of the microeconomic theory, is derived from the behaviour of individual entrepreneur. According to this theory, an individual entrepreneur in his investment activity is governed by the expected rate of profit on the one hand and rate of interest on the other. And so is the aggregate investment function. Similarly, the theory of aggregate consumption function is based upon the behaviour patterns of individual consumers.

- Almost all the tools of analysis used in macroeconomics have been borrowed from microeconomics (and then modified as per the requirements). These include, demand curves, supply curves, elasticities, income effect, substitution effect et(C)
- Several microeconomic phenomena have their effects on macroeconomic phenomena and several macroeconomic phenomena have their impact on microeconomic phenomena. For example, the behaviour of general price level, a variable studied at macroeconomic level, is determined by factors at microeconomic level; if price of oil rises, this may lead to cost-push inflation or simply a rise in prices of almost all commodities because of increase in cost of production. Similarly, if all individuals start saving some portion of their incomes simultaneously, it will lead to a reduced demand for goods and services which will in turn cause effects like fall in national output, increase in unemployment, deflation or decrease in prices. On the other hand, if an economy is doing well -income is rising, unemployment is low, prices are stable etc, individuals will be less mindful with regard to spending. The result -consumption will increase. Otherwise, people will be more conscious in their spending and consumption spending by individuals may decrease.

Finally, whatever differences there are between microeconomics and macroeconomics, these differences are narrowing down. An important manifestation of this narrowing down of differences between microeconomics and macroeconomics is the concept of micro-foundations of macroeconomic theories -the attempt to derive the behavioural equations of macroeconomics from the behaviour pattern of individuals as discussed in microeconomics to make macroeconomics more rigorous or accurate.

Since 1980s, a consensus has emerged among economists that valid economic analysis must begin with the behaviour of the elements of microeconomic analysis: individual households and firms that seek to optimize their conditions. For this reason, economists are making sustained efforts to merge microeconomics and macroeconomics by trying to develop microeconomic foundations for macroeconomic models.

6. What are scarcity and choice? How are they related?

The essence or the core of economics is the scarcity of resources and the problem of choice which arises because of it. Since we claim that this is the essence of economics, therefore, we feel the need for some elaboration of this point.

We all want more than we can get. We want good health and long lives. We want delicious and nutritious foo(D) We want spacious and comfortable homes. We want bikes and big cars. We want the time to study, enjoy our favourite sports, video games, novels, music, and movies; to travel to interesting places; and just to spend time with friends. This list is infinite and ever expanding. In short, our wants are unlimite(D)

But the ability of each of us (in our individual capacities) to satisfy our wants is limited by the time we have, the incomes we earn, and the prices we pay for the things we buy. These limits mean that everyone has unsatisfied wants. The ability of all of us as a society to satisfy our wants is limited by the productive resources that exist. These resources include the gifts of nature, our own labour and creativity, and the tools and equipment that we have made.

This feature of resources that their quantities are available less than their requirement or their supply is less than their demand is called scarcity. In other words, scarcity is the condition in which our wants (for goods and services) are greater than the limited resources (land, labour and capital) available to satisfy those wants.

Everyone, individual and society, poor and rich faces scarcity. Bill Gates, world's richest person as in 2014, might want more time with his family and friends, the Bill Gates charitable foundation, largest charitable foundation in the world, gives money to worthy causes but only in three areas: (1) to help the world's poorest people lift themselves out of hunger and poverty, (2) to harness advances in science and technology to save lives in developing countries, (3) to improve U.S. high school and postsecondary education and support vulnerable children and families in Washington State. These are not the only critical areas and worthy causes. There is always more his foundation could do. But he cannot do everything: Bill Gates faces scarcity!! The USA wants improved health care for its citizens, a house for every household, an internet connection in every classroom, an ambitious space exploration program, clean lakes and rivers, increase in defence spending, reduction in national debt, cut in taxes, and so on. But it cannot do everything: the USA faces scarcity!!!

Faced with scarcity, we must make choices. We must choose among the available alternatives to get the most out of our limited resources. Thus, scarcity leads to the problem of choice. Choice refers to the process of choosing or selection from available alternatives. It emerges from the following reasons.

1. Wants are unlimited and recurring and have varying intensity.
2. Resources are scarce and have alternative uses.

Bill Gates must choose to spend more time at work or with his family and friends. He must also choose to spend his wealth either for reducing hunger and poverty or green house gases. The USA must choose among health care, computers, space exploration, the environment, and so on.

Economics gets to the heart of these issues, analysing individual (consumer) and firm (producer) behaviour, as well as social and political institutions, to see how well they perform at converting humanity's limited resources into the goods and services that best satisfy human wants and needs. In other words, the solution to the problem of choice arising from the scarcity of resources requires that resources be used in such a manner so that wastage is minimised and outcomes are maximise(D) This is called efficient utilization of resources.

Many economists say that if scarcity didn't exist, neither would economics. In other words, if our wants weren't greater than the limited resources available to satisfy them, there would be no field of study called "economics." This is similar to saying that if matter and motion didn't exist, neither would physics or that if living things didn't exist, neither would biology. For this reason, many people define economics simply as the science of scarcity.

7. What is an economic problem? How does it arise? What are its different forms?

An economy is a system that coordinates choices about production with choices about consumption, and distributes goods and services to the people who want them. In other

words, an economy is a system or an institutional set up in which people earn their living, that is, make use of scarce resources to produce goods and services for the acquisition of material and immaterial requisites of life.

Economic problem is essentially the problem of rational choice or the issue of best possible use of resources which arises because of the scarcity of resources having alternative uses to maximise economic gains at the individual level and social welfare at the level of economy as a whole.

Since the problem of choice is the essence of economic life and is faced by every economic system at all levels, economic problem is called the central problem of an economy. . Central problems of an economy include;

1. What to produce and how much to produce.

Since all our wants cannot be satisfied at one time as resources are limited, we have to decide which type of goods and services are to be produce(D) The choice is to be made between basic necessities and luxuries, consumer goods and capital goods, and peacetime goods and wartime goods.

Having decided the type of goods to be produced and given the full-employment of resources, we have to decide the quantity (how much) of the goods is to be produce(D) If more of the consumer goods are produced, lesser of producer goods will be produce(D) If more of wartime goods are produced, there will be lesser resources available to produce peacetime goods.

In short, the 'what to produce' problem requires an economy to decide the mix and quantity of goods and services it needs to produce.

2. How to produce:

Because resources are scarce, one needs to make choices regarding how to make best possible use of resources to make goods and services so that there is no wastage in the use of resources. Thus, the problem of how to produce refers to the issue of choosing among alternative techniques or methods of production the most efficient one. In other words, this issue involves decisions on the combinations of resources and technologies to be used to produce goods and services as economically as possible. There are two types of techniques of production.

1. Capital intensive- this involves the use of relatively more capital than labour.
2. Labour intensive- this involves the use of relatively more labour than capital.

If a country with abundant labour uses capital intensive technique, some of its labour force will remain unutilise(D) Therefore, it should use labour intensive technique. This will help it to utilise its resources in the best possible way. Similarly, if a country with abundant capital uses labour intensive technique, some of its capital will remain unutilise(D) Therefore, it should use capital intensive technique so as to utilise its resources in the best possible way. Thus, the main issue is the best possible use of productive resources.

3. For whom to produce:

You may think that the question "for whom are goods and services produced?" has a simple answer: goods and services are produced for consumers. But this question goes beyond this simplicity. This refers to the issue of deciding who gets how much, *i.e.*, how to distribute what has been produce(D) Generally, any product will be distributed to consumers

on the basis of their ability and willingness to pay its existing market price. If the price of some product, say, iphone, is Rs 50,000, then buyers who are willing and able to pay that price will buy iphones. Consumers who are unwilling or unable to pay the price will be content with a less costly phone.

The ability to pay the prices for iphones and other products depends on the amount of income that consumers have, along with the prices of, and preferences for, various goods. If consumers have sufficient income and want to spend their money on a particular good, they can have it. And the amount of income they have depends on (1) the quantities of the property and human resources they supply and (2) the prices those resources command in the resource market. Resource prices (wages for labour, interest on capital, rent on land, and profit for entrepreneurship) are key in determining the size of each household's income and therefore each household's ability to buy part of the economy's output.

Since these three questions of what to produce, how to produce and for whom to produce, involve the issues relating to the efficient utilisation of resources, together these three are called the problems of allocation of resources, i.e., where and how the resources are to be use(D)

Additionally there are two more problems faced by modern economies.

4. Economic growth:

This refers to increasing the productive capacity of an economy. This can be achieved either through the increase in the quantity of productive resources or by technological change. By technology we mean the scientific know-how or scientific knowledge to produce goods and services.

An important benefit of economic growth is that it makes higher levels or larger quantities of goods and services available for consumption which is an essential component of welfare.

5. Stability of economy:

This involves ensuring that resources (men, machines and land etc) do not become unemployed, output and income does not fall and prices do not rise or fall fast. If resources become unemployed, they result in economic wastage. If output and income fall, the result is reduced consumption of goods and services. If prices rise fast they cause hardships for consumers, and if prices fall, they harm producers by reducing their profits.

8. What is production possibility frontier? Explain using a table and a diagram?

Scarcity of resources in relation to human wants gives rise to the fact that consumption opportunities are limited for individuals and countries, that is, we cannot have everything in our lives. If we want more income we have to work for longer hours, and have to give up some leisure. If we want to enjoy more time we have to work for lesser hours and have to give up some income; we cannot have more of both the worlds.

The need to choose among limited opportunities can be illustrated with a tool of economics called production possibility curve (PPC).

PPC is a diagram showing the maximum amount of one good or service that is possible with the full and efficient utilization of available resources and the use of best technology at the disposal of an economy, given the output of other goods and services.

The concept of PPC can be illustrated by considering an economy which satisfies following assumptions

- Resources are scarce
- Resources have alternative uses
- Resources are given (their quantity does not change)
- Resources are fully and efficiently utilised
- Best existing technology is used
- State of technology does not change (there is no technological progress)
- Only two goods -food grains and computers- are produced

Suppose the economy decides to use all the resources in the production of food grains. There is a maximum amount of food grains that can be produced per year. This maximal amount of food grains depends on the quantity and quality of the economy's resources and the productive efficiency or the technology with which they are use(D) Suppose 15,000 quintals is the maximum amount of food grains that can be produced with the given resources and existing technology. Since all the resources have been used in the production of food grains, no computers will be produce(D)

At the other extreme, imagine that all resources are instead devoted to the production of computers. Again, because of resource limitations, the economy can produce only a limited quantity of computers. Let this quantity be 5,000 computers of certain kind per year with zero quantity of food grains (as all resources have been used in the production of computers).

These are two extreme possibilities. In between are many others. Starting from 15,000 quintals of food grains and zero number of computers; if we give up some quantity of food grains we can produce some quantity of computers. This is possible by diverting some of the economy's resources from the production of food grains in to the production of computers.

Some of the production possibilities are shown in the following hypothetical table.

Alternative Production Possibilities

Production possibilities	***Food grains (quintals)***	***Computers (numbers)***
A	15,000	0
B	14,000	1,000
C	12,000	2,000
D	9,000	3,000
E	5,000	4,000
F	0	5,000

Possibility A shows the extreme where only food grains and no computers are produced, while possibility F depicts the other extreme where only computers and no food grains are produce(D) In between at B, C, D, and E some amount of food grains is given up in return for more computers. For example, if the economy is producing 15,000 quintals of food grains, it can produce no computers. If it wants to produce some computers, say 1,000, the only way it can do so is by diverting some resources from the production of food grains into the

production of computers. However, this will decrease quantity produced of food grains, say from 15,000 quintals to 14,000 quintals, that is, by 1,000 quintals and so on.

These production possibilities can more clearly be represented with a diagram as shown below;

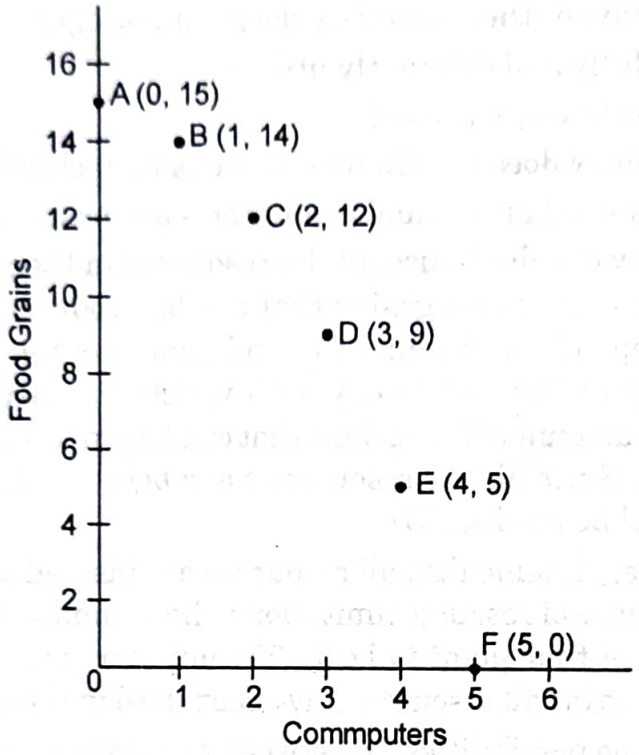


Fig. 1.1

This diagram measures food grains on vertical axis and computers on horizontal axis. We plot different production possibilities of the previous table as different points in the diagram.

If we fill in all the intermediate positions with new points representing all the possible combinations, we have a continuous curve known as production possibility curve as shown in figure 1.2 below.

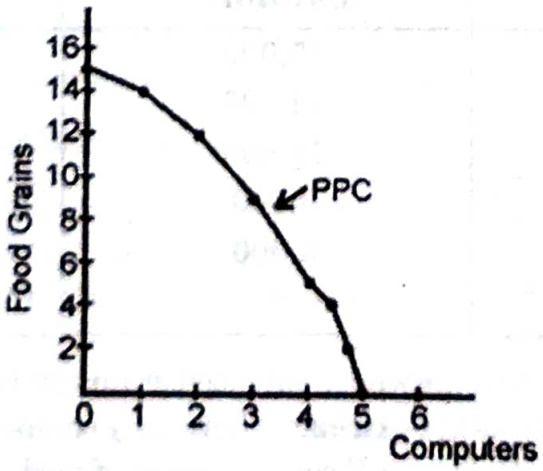


Fig. 1.2

This curve shows the maximum amount of either good that is consistent with any given amount of other, through the full and efficient utilization of resources and the use of

CHAPTER 2

Demand and Supply

1. What is demand? What are its various determinants? How is demand related to its determinants?

Ans. Demand

Demand for any good is the quantity of it that consumers desire to purchase from the market at various prices per period of time. It is also defined as the desire to have a good backed by ability and willingness to pay for it, that is,

Demand = desire + ability to pay + willingness to pay

Three important things emerge from the above definition:

1. **Demand is a desire :** It is how much quantity of a good consumers desire or wish to purchase at alternative prices, not necessarily how much they actually succeed in purchasing. It is what they intend or plan to do, not what they actually do. The quantity which consumers actually succeed in purchasing may be called quantity actually purchased.
2. Mere desire is not demand. Desire to have a good must be backed by ability to pay and also willingness to pay for it, that is, a person should have money and he should be ready to pay it for the good. When desire to have a commodity is backed by ability as well as willingness to pay, it is often referred to as *Effective Demand*.
3. Demand is a flow concept. In economics a variable is regarded as flow if it is measured over a period of time. The period of time can be as short as a minute or as long as a decade. For example, when we consider income of a person, we say so many rupees per day, per week or per month. Demand also takes place over a period of time, that is, so much quantity of a good a consumer or consumers intend to purchase per day, per month or per year. Therefore, demand is a flow concept.

Individual Demand and Market Demand

In microeconomics, demand is studied at two levels; at individual level called individual demand and at market level called market demand.

Individual demand for a good is the quantity of it which a single consumer or a single household desires to purchase from the market at various prices, per period of time.

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1. Effective demand is often distinguished from latent or notional demand where latent demand refers to the desire for a good not backed by ability to purchase it, that is, in case of latent demand the consumer has the desire to have a good but he has no money to purchase it. Generally, demand is taken in the sense of effective demand so that whenever we use the term 'demand' we mean 'effective demand'.

Market demand for a good is the quantity of it which all the consumers or households who consume the good, desire to purchase from the market at various prices, per period of time. In other words market demand is the sum total of all individual demands. For this reason market demand is also called total demand.

Determinants of Demand

Determinants of demand are the factors which influence the quantity of each good that is demanded by consumers in the market. In other words, determinants of demand are the factors which determine how much quantity of a good is demanded by consumers in the market. These include:

1. Own price of the good
2. Prices of related goods
3. Income of the consumer
4. Tastes and preferences of the consumer
5. Size of population
6. Distribution of income
7. Expectations
8. Other factors

If we take X the good to be studied, we can use the following symbols to represent the above factors:

PX : Price of good X or own price of the good
PZ: price of a related good
Y : income of the consumer
T : Tastes and preferences of the consumer
P : Size of population
YD : Distribution of income
E : Expectations
O : Other factors

Now we shall study the influence of these factors on demand individually, that is, we shall take one factor at one time. While doing so, other factors need to be held unchanged or constant. Specifically, when we study the effect of own price of the good on the demand for the good, we shall assume other determinants to be fixed, unchanged or constant. When we study the effect of income of the consumer on the demand for a good, we shall assume other factors including own price of the good to be constant and so on. This is called the assumption of ceteris paribus which means other things being equal, fixed or constant.

Now let us take determinants of demand one by one:

1. Own Price of the Good

Own price of a good is the most important determinant of the demand for it. It is the most widely analysed determinant of demand. The relationship between quantities demanded of a good and its price is called price demand. But this factor being the most

important determinant of demand, this relationship, instead of referring to it as price demand, is often simply referred to as demand. In algebraic form this relationship is expressed as follows:

$$Q = f(Px)$$

This expression called price demand function or simply demand function means that quantity consumed of a good depends on its own price, other things remaining the same.

Till now we have become familiar with the fact that there exists a definite relation between quantity demanded of a good and its own price. Now the question is *'what is the nature of this relation, or in mathematical terms, what is the form of this function?'* In other words what is the direction of change between the two variables, that is, price being independent variable and quantity demanded dependent variable, how quantity demanded changes as a result of change in price? Change in price can be of two types; increase in price or decrease in price. It has been observed and also verified scientifically (empirically) that there exists a negative or an inverse relation between own price of a good and its quantity demanded. It means, other things held unchanged, when price increases quantity demanded decreases and when price decreases quantity demanded increases.

2. Prices of Related Goods

The second determinant of demand for a good is the prices of its related goods. The relationship between quantity demanded of a good and prices of its related goods, other things held unchanged, is called cross demand. In symbols,

$$Qx = f(P_z)$$

Where P_z is the price of a related good

Related goods are of two types: substitutes and compliments. Two goods are substitutes if they can be used instead of one another, that is, if they are used to satisfy a same want or to perform a same function. For example, a pen and a pencil, either of which can be used to write something.

Two goods are complements if they are used together so that when one good is purchased other is also purchased. Common examples of such goods are cups and saucers, cars and petrol et(C) the demand for such goods is called joint demand because they meet the same demand hence must be demanded jointly.

Depending on the type of related goods, there are two types of relation between demand for a good and prices of its related goods. In case of substitutes, this relation is positive or direct. It means, other things held unchanged, if price of good A increases, quantity demanded of its substitute good B also increases and if price of good A decreases, the demand for good B also decreases. For example, if price of Sony mobile sets increases, the demand for Samsung sets, the substitutes of Sony sets, will also increase and if price of Sony sets decreases lesser number of Samsung sets will be purchased, that is, the demand for Samsung sets will also decrease.

In case of complements, the relation is inverse or negative. It means, other things held unchanged, if price of good A increases, the quantity demanded of its complement good B decreases and if price of good A decreases, quantity demanded of good B increases. For

example, if price of petrol decreases demand for cars increases and if price of petrol increases, demand for cars decreases.

In between complementary goods and substitute goods is the case of independent goods or unrelated goods. In case of independent goods there is no relation between the price of one and quantity demanded of other. For example, the case of mutton and books; the change in price of one has no effect on the quantity demanded of other.

3. Income of the Consumer

Consumer's income is another important determinant of quantity demanded of a good by the consumer. The relation between quantity demanded of a good and income of a consumer, ceteris paribus, is called income demand. In symbols, this relation is expressed in the following functional form:

$$Q_x = f(Y)$$

This expression means that quantity demanded of a good depends on the income of the consumer, other things remaining the same

But this relation is not as simple as that of price of a good and its quantity demanded. In case of own price of a good and its quantity demand, the relationship is simply inverse or negative. But in case of income, the relation can either be positive or negative. This means when income of a consumer increases, other things held unchanged, quantity demanded of some goods may increase while that of others may decrease. Even for a same good the relation may be positive at lower levels of income and negative at higher levels of income.

On the basis of income-demand relation, that is, whether it is positive or negative, goods are classified in to two categories; normal goods and inferior goods.

Goods in case of which there exists positive relationship between income of a consumer and quantity demanded of a good, other things remaining the same are called normal goods. That is, when income rises quantity demanded of the good also rises and when income falls, quantity demanded of the good also falls. These goods are termed normal goods because positive income-demand relation is normally expected to be true.

Goods in case of which there exists negative relationship between income of a consumer and quantity demanded of a good, other things remaining the same, are called inferior goods. That is, when income rises quantity demanded of the good falls and when income falls, quantity demanded of the good rises. These are often those things which are regarded as cheap, inferior, substitutes for other goods. Travelling by bus may provide an example.

4. Tastes and Preferences

Tastes and preferences of a consumer mean his likes and dislikes. It involves the fact that there are certain psychological, cultural, traditional, religious and historical reasons to like or dislike a good. If there are two goods and they are substitutes for one another, the consumer may like both of them. But the consumer may like one more than the other. In other words, his preference for one is stronger than for the other. The principal is; other things being constant, the more a consumer likes a good, the greater is his demand for it and the less a consumer likes a good, the less is his demand for it.

5. Size of Population

Population is another determinant of demand. But, as we shall see below, it is a determinant of market demand and not of individual demand. In case of demand, population actually means the number of buyers of a good. As we will see shortly, market demand is simply the sum of individual demands. Therefore, if there is large number of buyers of a good, there must be more market demand for it and if the number of buyers is small, market demand will be less.

6. Expectations

Expectations regarding to future changes in prices and availability or non-availability of a good may also affect demand for it. If people foresee a rise in price of a good they will purchase more of it immediately and if they expect a fall in price of a good, they postpone its purchase till the price actually falls. Thus, there is a gamble here: the buyer expects the price to change. So the principle is: if buyers expect price to rise, the demand rises today and if they expect the price to fall demand also falls.

There is another type of expectation which may affect the demand for a good. This is regarding future availability or non-availability of the good. If one expects the good will be soon unavailable, he will purchase more of it today and its demand increases.

7. Distribution of Income

Income also affects demand by way of its distributional aspect. If total income and all other determinants are constant, a change in the distribution of that income can change demand for many goods. When distribution of income changes, demand for those goods will rise which are consumed by income gainers and goods which are consumed by losers of income, for them demand will fall.

8. Other Factors

Several other factors affect the demand for a good. Some of these are: weather, festivals, knowledge, technology, fashion, advertising, government policies (like taxes, subsidies, and laws), wars, rumours - well-furnished or not - et(C) For example, demand for cold drinks and ice-creams is high during summer while as it is low during winter. Similarly, on the occasion of Eid demand for meat is high in Muslim majority areas and on the occasion of Holi demand for colours is high in Hindu majority areas and so on.

Three Types of Demand

Among all the determinants of demand, three factors are most important. These are own price of the good, prices of related goods and income of the consumer. It is because of this fact that demand is sometimes categorised in to three types; price demand, income demand and cross demand.

1. **Price demand :** The entire relationship between the quantity of a good that consumers wish to purchase per period of time and the price of the good, other things being equal is called price demand.

2. **Income demand :** The entire relationship between the quantity of a good that consumers wish to purchase per period of time and the income of the consumer, ceterus paribus, that is other things being equal, is called income demand.
3. **Cross demand :** The entire relationship between the quantity of a good that consumers wish to purchase per period of time and the prices of other goods, that is, prices of its related goods, ceteris paribus, is called cross demand.

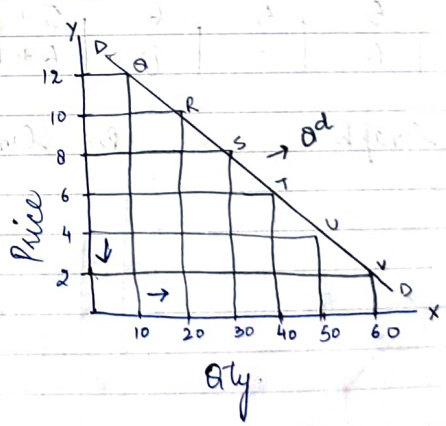
Law of Demand:→ An important generalisation about demand is described by law of demand. This law of demand expresses the functional relationship between price and quantity demanded. The LOD of or functional rel. b/w price & qty. demanded is one of the best known & most important law of economic theory.

Acc. to this law, other things being equal, if price of a commodity falls, the qty demanded of it will rise & if the price of a commodity rises, its qty. demanded will decline. Thus, there is a inverse relationship b/w price & qty. demanded, other things remaining the same. These others things assumed to be constant are the tastes or preferences of the consumer, the income of the consumer, the price of related goods. If these things undergo a change, then the inverse price-quantity relationship may not hold good.

Demand Schedule:→ It is a tabular presentation of price-demand relationship for a good for a specific period of time. other things unchanged

Demand Schedule of an Individual Consumer

price	Qty Demanded
12	10
10	20
8	30
6	40
4	50
2	60



Demand Curve:→ It is a graphical presentation of price-demand relationship

Demand Schedule of Market

Suppose there are only 2 consumers A & B of a good say ice-cream. By adding their respective demand for good for a specific period at particular set of prices.

Sec 1
A's Demand Schedule

P	Q.D
15	0
10	1
8	2
6	4
5	5
3	6

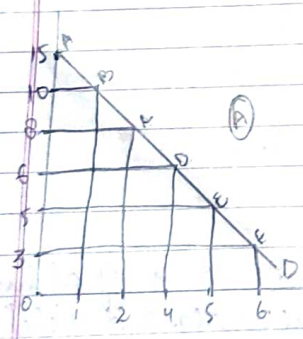
Sect 2
B's Demand Schedule

P	Q.D
15	1
10	2
8	4
6	5
5	6
3	8

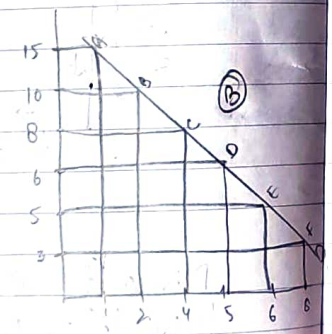
Sec 3
Market Demand Sch. (A+B)

Q.D
0 + 1 = 1
1 + 2 = 3
2 + 4 = 6
4 + 5 = 9
5 + 6 = 11
6 + 8 = 14

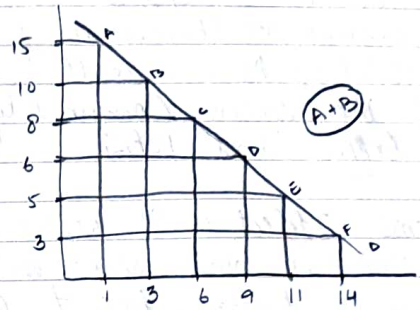
A's Graph



B's Graph



Market Demand Graph :- We can add or sum up the various quantities demanded by the no. of consumers in the market & by doing so we can obtain the market demand curve for a commodity.



↳ **Reason for the Law of Demand :-**
Why does Demand Curve Slopes downward

1. **Law of Diminishing Marginal Utility :-** It states that as we consume more & more units of a commodity the utility derived from each successive unit goes on decreasing so demand depends on its utility. If a consumer gets more satisfaction, he will pay more. As a result, consumer will not be prepared to pay the same price for additional units of the commodity. He will buy more units only when the price falls.

2. Substitution Effect :→ It refers to substituting one commodity in place of other when it becomes relatively cheaper. When price of the given commodity falls, it becomes relatively cheaper as compared to its substitute (assuming no change in price of substitute). As a result, demand for the given commodity rises. E.g Coke and Pepsi

3. Income Effect :→ It refers to effect on demand when real income of consumer changes due to change in price of a given commodity. When price of the given commodity falls it increases the purchasing power (real income) of the consumer. As a result he can purchase more of the given commodity with the same money income.
E.g 40 - pocket money
4@10 each
If 8 each Then 5@8each.

4. Additional Consumers :→ When price of a commodity falls, many new consumers who were not in a position to buy it earlier due to its high price

starts purchasing it. In addition to new customers, old consumers of the commodity starts demanding more due to its reducing price e.g I phone.

5. Different Uses :→ Some commodities like milk, electricity etc have several uses some of e are more imp. than the other. When price of such a good (say milk) increases, its uses get restricted to the most imp. purpose (say drinking) & demand for less imp. uses (like cheese, butter etc) gets reduced. However, when the price of such a commodity decreases, the commodity is put to all its uses, whether important or not.

Exceptions to Law of Demand :-

In certain circumstances, the reverse may occur i.e rise in price may increase the demand. These circumstances are called Exception to the LOD

Some of the exceptions are :-

1. Giffen goods :- These are special kind of inferior goods on ç the consumer spends a large part of his income & their demand rise ē an inc. in price & demand falls ē dec in price e.g in our country it is often seen that when price of coarse cereals like jowar & bajra falls the consumer have a tendency to spend less on them & shift over to superior cereals like wheat & rice. This phenomenon, popularly known as Giffen's Paradox was first observed by Sir Robert Giffen.

2. Status Symbol Goods or Good of Ostentation :- The exception relates to certain prestige goods ç are used as status symbol e.g diamond, gold and antique paintings.

3. Fear of Shortage :- If the consumer expect a shortage or scarcity of a particular commodity in the near future then they would start buying more & more of that commodity in the current period even if the prices are rising.

4. Ignorance :- Consumers may buy more of a commodity at a higher prices when they are ignorant of the prevailing prices of the commodity in the market.

4. Fashion related goods :- Goods related to fashion do not follow LOD × their demand inc. even with a rise in their prices.

5. Necessities of Life :- Commodities like rice, wheat, salt, medicine etc are purchased even if their prices increase because such commodities have become necessities of life due to their constant use.

6. Change in Weather :- With change in weather demand for certain commodity also changes, irrespective of any changes in their prices e.g umbrella in rainy season.

↳ **Determinants of Demands**:- The following are the factors ⊆ determine demand for a good.

1. Own price of a good (PX) $Q = f(P_x)$
2. prices of related goods (PZ) $Q_x = f(P_z)$
3. Income of the consumer (Y)
4. Taste & preference of the consumer (T)
5. Size of population (P)
6. Distribution of income (YD)
7. Expectations (E)
8. Other factors (O)

↳ **Shifts in Demand Curve** :-

Change in Demand occurs due to change in factors other than price leads to Shift in Demand Curve

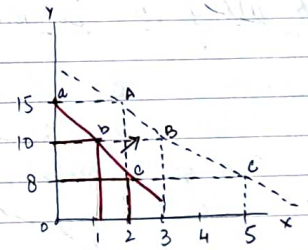
Either ↓ Rightward Shift ↓ Increase in Demand (due to favourable changes in other factors at the same price)

or ↓ Leftward Shift ↓ Decrease in Demand due to unfavourable changes in other other factors at the same price

1. **Increase in Demand** :- refers to the rise in the demand of a commodity caused due to any other factor other than the own price of the commodity. In this case, demand rises at the same price or demand remains same even at higher prices.

Eg

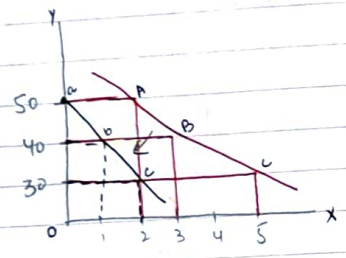
price of Coffee	QD in Summer	QD in Winter
15	0	2
10	1	3
8	2	5



QD in Summer
QD in Winter

2. **Decrease in Demand** :- refers to the fall in demand of a commodity caused due to any factor other than the own price of a commodity. In this case, demand falls at the same price or demand remain same even at the lower price.

Price of Meat	QD when high income	QD when low income
50	2	0
40	3	1
30	5	2



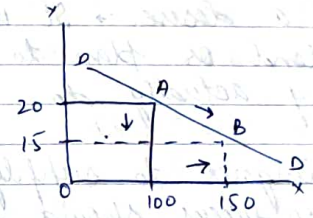
QD when high income
QD when low income

↳ **Movements along a Demand Curve:-**

Changes in Qty. demanded
occurs due to
change in price
leads to
Movement along the Demand Curve
either / or
Downward Movement known as Expansion in Demand (due to dec. in price)
Upward Movement known as Contraction in Demand (due to increase in price)

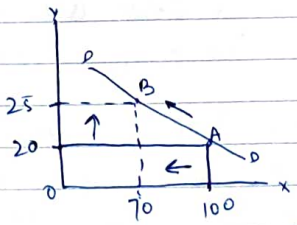
1. **Expansion in Demand** :- refers to a rise in the Qty demanded due to a fall in the price of commodity, other factors remaining constant.

Price	Demand
20	100
15	150



2. **Contraction in Demand** :- refers to a fall in the Qty. demanded due to a rise in the price of commodity other factors remaining constant

Price	Qty dem.
20	100
25	70



Supply :→ Supply of any good is the qty of the good that firms or producers are willing & able to offer for sale in the market at all possible prices, per period of time.

Therefore 3 things emerge from the above definition

1. Supply is a desire :→ It is what they intend or plan to do, not what they actually do.

2. Mere willingness to supply is not supply producers should be able to hire factors inputs & procure raw material & undertake prod. process.

3. Supply is a flow concept :- It is not a single isolated production Rather it is so much qty per period of time.

↳ **Determinants of Supply** :→

1. Own price of a good :→ Qty supplied of good depends on its own price other things being constant. There exist +ve / direct relationship b/w own price of a good & its qty i.e if price of a commodity increases the qty supplied of that commodity will also increase or vice-versa.

2. Price of Input :→ If the price of an input rise, the cost of prod will surely inc. Consequently, profit will tend to decline. Seeing an unprofit situation, a firm will reduce the supply of a commodity & will try to switchover to the production of another commodity which is still not unprofitable

3. Price of related good :→ If market price of wheat rises, the jute farmers would be interested in wheat prod. so that in the next season they can inc. the supply of wheat.

4. Technology :→ As newer & modern technologies are employed in a concern, prod & productivity rise & average cost of prod. tend to decline. This result in a change on qty supplied

5. Firms Objectives :- If the firms aim at maximisation of sales rather than profit, then the supply of commodity under this is likely to be different

6. Govt policy :- By imposing taxes on firms the govt can affect the supply of a commodity

7. No. of firms
8. Expectation regarding future price of the product

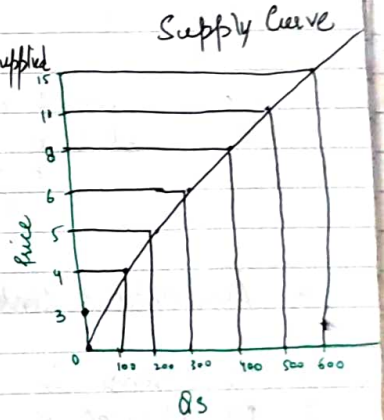
↳ **LAW OF SUPPLY** :- The law of supply reflects the general tendency of the sellers in offering their stock of a commodity for sale in relation to the varying prices
It describes seller's supply behaviour under given conditions. It has been observed that usually sellers are willing to supply more with a rise in prices.

The LOS may be written as:
Other things remaining unchanged, the supply of a commodity rises i.e expands with a rise in its price & falls i.e contracts with a fall in its price. OR
Higher the price higher the supply
Lower " " lower " "

The law thus suggests that the supply varies directly with the change in price. So a larger amount is supplied at a higher price that a a low price in the market

↳ **Supply Schedule** :- Tabular presentation of individual producers supply at a given price

Price	Qty Supplied
3	0
4	100
5	200
6	300
8	400
10	500
15	600



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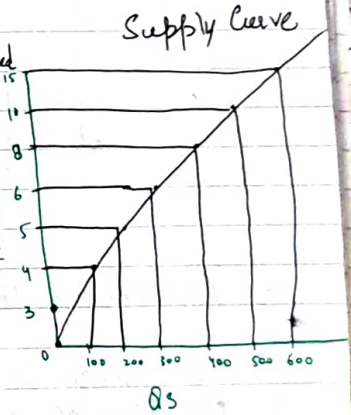
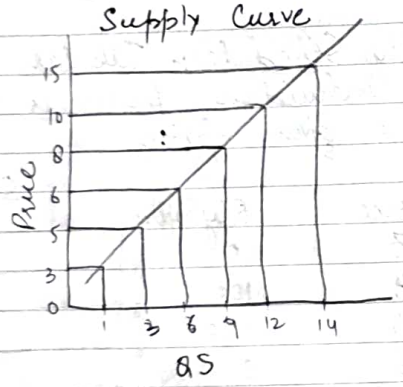


↳ Supply Schedule of Market

A's Supply		B's Supply		Market Supply	
P	Qs	P	Qs	P	Qs
3	0	3	1	3	0+1=1
5	1	5	2	5	1+2=3
6	2	6	4	6	2+4=6
8	4	8	5	8	4+5=9
10	5	10	7	10	5+7=12
15	6	15	8	15	6+8=14



↳ Assumptions Underlying the LOS :→

1. No change in the income
2. No change in technique of prod.
3. " " " transport cost
4. " " " cost of prod.
5. Fixed scale of prod.
6. There should not be any speculation
7. The price of other goods should remain constant
8. No changes in Govt. policies

↳ Reasons for operation of Law of Supply

1. Profit Motive
2. Change in No. of firms :→ A rise in P induces the prospective producers to enter into the market to produce the given commodity so as to earn higher profit.
3. Change in Stock :→ When the price of a good increases the sellers are ready to supply more goods from their stock & vice-versa. They start increasing their inventories ☪ a view that price may rise in near future.

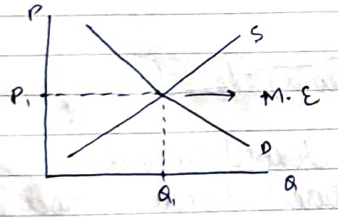
↳ Exceptions to Law of Supply

1. Future Expectations :→
2. Agriculture Goods :→ Prod. of such goods depend on climatic condition ∴ If due to unforeseen changes in weather, the prod. of agr. products is low, then their supply cannot be inc. even at hg. prices.

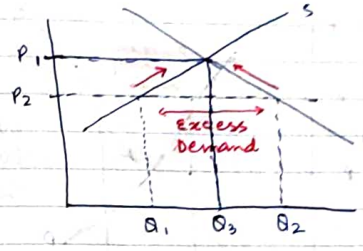
3. Perishable goods :→
4. Rare Articles
5. Backward Countries :→ In such countries, prod. & supply can't be increased & rise in prices due to shortage of resources.

Market Equilibrium :→ When supply & demand curve intersect, the market is in eq. This is where the qty. demanded & qty. supplied are equal. When the market is in eq., there is no tendency for prices to change. We say the market-clearing price has been achieved.

Market eq. can be shown using supply & demand diagrams.



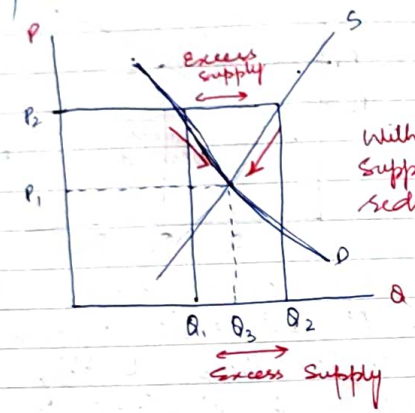
→ If price is below the eq.



With a shortage, firms put up prices & supply more

- In the above diagram, P2 is below eq. At this price, demand would be greater than supply. Therefore there is a shortage of (Q2-Q1)
- If there is a shortage, firms will put up prices & supply more. As price rises, there will be a movement along the demand curve & less will be demanded.
- Therefore the price will rise to P1 until there is no shortage & supply = demand.

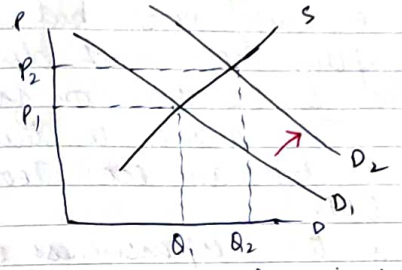
→ If price is above the eq.



- If price was at P2, this is above the eq. of P1. At the price P2, then supply (Q2) would be greater than demand (Q1) x therefore there is too much supply. There is a surplus (Q2-Q1)
- Therefore firms would reduce price & supply less. This would encourage more demand & therefore the surplus will be eliminated. The new eq. will be at Q3 x P1.

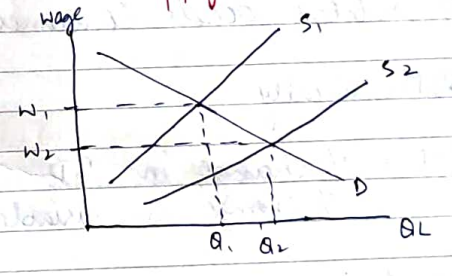
⇒ Movements to a new eq.

1. Inc. in demand



If there was an inc in income the DC would shift to right (D1 to D2) Initially there would be a shortage of the good. Therefore the P & Q supplied will inc. lead to new eq. at Q2, P2.

2. Inc. in Supply



An increase in supply would lead to a lower price & more Qty sold.

↳ ELASTICITY OF DEMAND :→

law of demand tells us that ↑ rise in price the demand dec or vice-versa. but, it fails to explain how much demand inc. or dec. ↓ the rise or fall in price. The answer to this question is given by an eco. tool known as EOD.

EOD is the responsiveness of the qty. demanded of a commodity to changes in one of the variables on ↓ demand depends. In other words, it is the percentage change in QD divided by the % change in one of the variables on ↓ demand depends like price, price of related goods, Consumer's income etc

Mathematically

$$EOD = \frac{\% \text{ change in QD}}{\% \text{ change in variables}}$$

↳ We have 3 types of EOD

1. Price EOD
2. Cross EOD
3. Income EOD

→ **Price EOD :→** is the response of QD to change in the price of a commodity. It is assumed that other things remain unchanged. It is measured as a % ch. in QD divided by the % ch. in price. It is denoted by e_d

$$e_d = \frac{\% \text{ age ch. in QD}}{\% \text{ age ch. in price}} \quad \text{or} \quad \frac{\% \Delta Q_d}{\% \Delta P}$$

2. **Cross EOD :→** of a commodity X for another commodity Y, is the change in demand of commodity X due to change in the price of commodity Y. symbolically

$$E_c = \frac{\Delta q_x}{\Delta p_y} \times \frac{p_y}{p_x}$$

3. **Income EOD :-** is the degree of responsiveness of the QD to a change in the consumer's income.

Symbolically

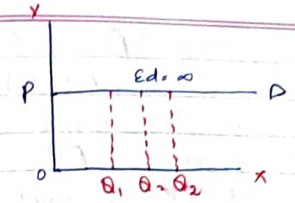
$$E_i = \frac{\% \text{ ch. in QD}}{\% \text{ ch. in Income}}$$

↳ Degrees of Price EOD

Different commodities have different price elasticity's. Some commodities have more elastic demand while other's have relative elastic demand. Basically the price EOD ranges from zero to infinity. It can be equal to zero, less than one, greater than one & equal to unity. The elasticity or responsiveness of demand in market is great or small according as the amount demanded increases much or little for a given fall in price & diminishes much or little for a given rise in price.

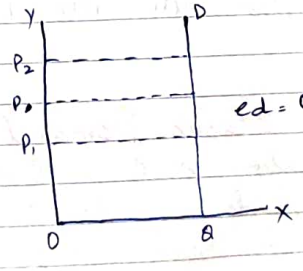
Some particular values of EOD have been explained as under :-

1. **Perfectly Elastic Demand :-** is said to happen when a little change in price leads to an infinite change in QD. A small rise in price on the part of the seller reduces the demand to zero. In such a case the shape of the DC will be horizontal straight line.



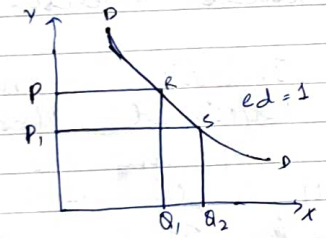
The fig shows that at the ruling price OP, the D is infinite. A slight ~~right~~ rise in price will contract the demand to zero. A slight fall in price will attract more consumers but the EOD will remain infinite. But in real world the cases of perfectly Elastic demand are exceedingly rare & are not of any practical interest.

2. **Perfectly Inelastic demand :-** is opposite to perfect Ed. Under this, irrespective of any rise or fall in P of a commodity, the QD remains the same. The EOD in this case will be equal to zero (ed=0)



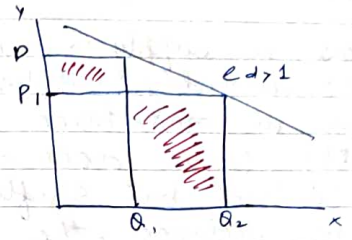
At price OP, the QD is OQ. Now the price falls to OP_1 from OP, the Demand remains the same. Similarly if the prices rises to OP_2 the demand still remains the same. But just as we do not see the examples of this kind in real world.

3. **Unitary Elastic Demand** :→ The demand is said to be unitary elastic when a given proportionate change in the price level brings about an equal proportionate change in QD. The numerical value of this demand is exactly 1



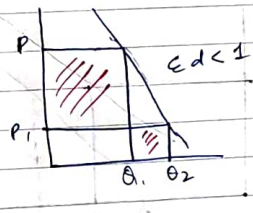
If price changes by 10%. Then the Qty demanded will also change by 10%.

4. **Relatively Elastic Demand** :→ refers to a situation in ⊆ a small change in price leads to a big change in Qty. demanded. In such a case ∈OD is said to be more than one ($ed > 1$)



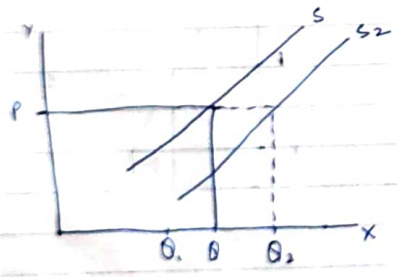
Qty changes more than change in price

5. **Relatively Inelastic Demand** :- in this, a given % age ch. in price produces a relatively less % age ch. in QD. In such a case ∈OD is said to be less than one ($ed < 1$)



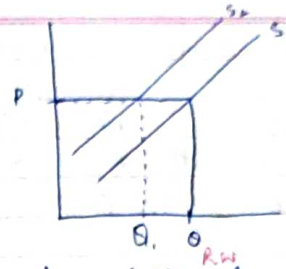
↳ Shifts in Supply Curve :→

1. Increase in Supply :→ When the qty of the commodity supplied due to change in non-price factors. The supply curve does not extend or contract but shifts entirely. For an instance, the introduction of improved technology in industries helps in reducing the cost of production & induces prod of more units of good at the same price. As a result, the qty of commodity supplied inc. but the price of the commodity remains as it is.



rightward shift

2. Decrease in Supply :→ is the fall in qty supplied of a good in response to a change in any of the determinant other than its own price.



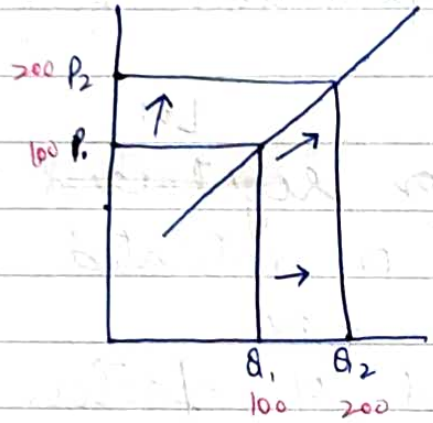
leftward shift

→ Reasons for ~~leftward~~ RW shift
1. Improvement in technology
2. Decrease in Tax
3. Decrease in cost of factors of prod
4. Favourable weather condition
5. Seller's expectation of fall in price in future.

⇒ Reason for ~~rightward~~ LW shift
1. Use of old or outdated technology
2. Increase in tax
3. Inc. in cost of factors of prod.
4. Unfavourable weather condition
5. Seller's expectation of rise in price in future.

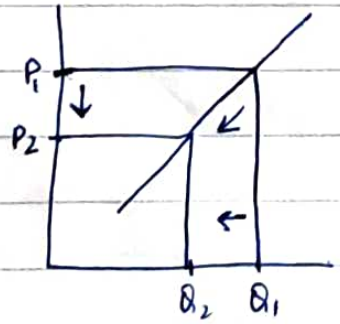
→ Movement along a supply curve :→ represents the variation in qty. supplied of the commodity with a change in its price & other factors remaining unchanged.

1. Extension in supply curve :→ is caused when there is an increase in the price or qty. supplied of the commodity. other things held constant



P = 100 P 200
S = 100 S = 200

2. Contraction in Supply curve :→ is the fall in Qty supplied of a good because of fall in its price - other things held unchanged.



P = 100 P = 50
S = 100 S = 50